

## PA JAKA APA

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- Gravity **16.4 BLG**
- ABV ---
- IBU **61**
- SRM **9.6**
- Style **American Pale Ale**

### Batch size

- Expected quantity of finished beer **22 liter(s)**
- Trub loss **5 %**
- Size with trub loss **24.2 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **29 liter(s)**

### Mash information

- Mash efficiency **85 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **18.8 liter(s)**
- Total mash volume **25 liter(s)**

### Steps

- Temp **63 C**, Time **60 min**
- Temp **72 C**, Time **10 min**
- Temp **78 C**, Time **1 min**

### Mash step by step

- Heat up **18.8 liter(s)** of strike water to **70.1C**
- Add grains
- Keep mash **60 min** at **63C**
- Keep mash **10 min** at **72C**
- Keep mash **1 min** at **78C**
- Sparge using **16.5 liter(s)** of **76C** water or to achieve **29 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Karmel 150	0.25 kg (4%)	75 %	150
Grain	Strzegom Pale Ale	5 kg (80%)	79 %	6
Grain	Strzegom Pilzneński	1 kg (16%)	80 %	4

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Magnum	50 g	60 min	13.5 %
Whirlpool	Cascade	30 g	120 min	6 %
Dry Hop	Citra	50 g	7 day(s)	12 %

### Yeasts

Name	Type	Form	Amount	Laboratory
Safale US-05	Ale	Dry	11.5 g	Fermentis